

Amendments to the Claims:

This listing of claims will replace all prior version, and listings, of claims in the application.

Listing of Claims:

1. (Currently Amended) A method for selectively releasing locks on data, comprising the steps of:

(a) providing at least one savepoint in a transaction, wherein a first lock and a second lock are acquired after the at least one savepoint, wherein the first lock is assigned to the at least one savepoint and the second lock is assigned to the transaction;

(b) rolling back the transaction to the at least one savepoint; and

(c) releasing ~~the first lock~~ any locks assigned to the at least one savepoint, wherein any locks assigned to the transaction ~~is~~ are maintained, ~~wherein the first lock is released and the second lock is maintained.~~

2. (Previously Amended) The method of claim 1, wherein the providing step (a) comprises:

(a1) providing a sequence of savepoints in the transaction, wherein the first lock is assigned to one of the sequence of savepoints and the second lock is assigned to the transaction.

3. (Original) The method of claim 1, wherein the rolling step (b) comprises:

(b1) rolling back the transaction to one of a sequence of savepoints.

4. (Previously Amended) The method of claim 1, wherein the releasing step (c) comprises:

(c1) releasing the first lock assigned to one of a sequence of savepoints to which the transaction is rolled back; and

(c2) releasing any locks assigned to subsequent savepoints, wherein the second lock assigned to the transaction and any locks assigned to preceding savepoints are maintained.

5. (Original) The method of claim 4, further comprising:

(c3) releasing another of the sequence of savepoints.

6. (Original) The method of claim 5, further comprising:

(c4) reassigning at least one lock assigned to the another of the sequence of savepoints to a preceding savepoint.

7. (Original) The method of claim 5, further comprising:

(c4) maintaining knowledge of the released another of the sequence of savepoints, such that if the transaction is rolled back to a preceding savepoint, the at least one lock assigned to the released another of the sequence of savepoints is released.

8. (Currently Amended) A method for selectively releasing locks on data, comprising the steps of:

(a) providing a sequence of savepoints in a transaction, wherein a first lock is assigned to one of the sequence of the savepoints and a second lock is assigned to the transaction, wherein the first and second locks are acquired after the one of the sequence of savepoints;

(b) rolling back the transaction to the one of the sequence of savepoints;

(c) releasing ~~the first lock~~ any locks assigned to the one of the sequence of

savepoints, wherein the first lock is released; and

(d) releasing any locks assigned to subsequent savepoints, wherein ~~the second lock~~ any locks assigned to the transaction and any locks assigned to preceding savepoints are maintained, wherein the second lock is maintained.

9. (Currently Amended) A computer readable medium with program instructions for selectively releasing locks on data, comprising the instructions for:

(a) providing at least one savepoint in a transaction, wherein a first lock and a second lock are acquired after the at least one savepoint, wherein the first lock is assigned to the at least one savepoint and the second lock is assigned to the transaction;

(b) rolling back the transaction to the at least one savepoint; and

(c) releasing ~~the first lock~~ any locks assigned to the at least one savepoint, wherein ~~the second lock~~ any locks assigned to the transaction ~~is are~~ maintained, wherein the first lock is released and the second lock is maintained.

10. (Original) The medium of claim 9, wherein the providing instruction (a) comprises instructions for:

(a1) providing a sequence of savepoints in the transaction, wherein at least one lock is assigned to one of the sequence of the savepoints and the second lock is assigned to the transaction.

11. (Original) The medium of claim 9, wherein the rolling instruction (b) comprises instructions for:

(b1) rolling back the transaction to one of a sequence of savepoints.

12. (Original) The medium of claim 9, wherein the releasing instruction (c) comprises instructions for:

(c1) releasing the first lock assigned to one of a sequence of savepoints to which the transaction is rolled back; and

(c2) releasing any locks assigned to subsequent savepoints, wherein the second lock assigned to the transaction and any locks assigned to preceding savepoints are maintained.

b 13. (Original) The medium of claim 12, further comprising instructions for:

(c3) releasing another of the sequence of savepoints.

14. (Original) The medium of claim 13, further comprising instructions for:

(c4) reassigning at least one lock assigned to the another of the sequence of savepoints to a preceding savepoint.

15. (Original) The medium of claim 13, further comprising instructions for:

(c4) maintaining knowledge of the released another of the sequence of savepoints, such that if the transaction is rolled back to a preceding savepoint, the at least one lock assigned to the released another of the sequence of savepoints is released.

16. (Currently Amended) A computer readable medium with program instructions for selectively releasing locks on data, comprising the instructions for:

(a) providing a sequence of savepoints in a transaction, wherein a first lock is assigned to one of the sequence of the savepoints and a second lock is assigned to the transaction, wherein the first and second locks are acquired after the one of the sequence of savepoints;

- (b) rolling back the transaction to the one of the sequence of savepoints;
- (c) releasing ~~the first lock any locks~~ assigned to the one of the sequence of savepoints, wherein the first lock is released; and
- (d) releasing any locks assigned to subsequent savepoints, wherein ~~the second lock any locks~~ assigned to the transaction and any locks assigned to preceding savepoints are maintained, wherein the second lock is maintained.

17. (Currently Amended) A system, comprising:
a transaction, wherein a first lock is assigned to the transaction; and
at least one savepoint associated with the transaction, wherein a second lock is assigned to the at least one savepoint, wherein the first and second locks are acquired after the at least one savepoint, wherein in a rollback to the at least one savepoint, ~~the second lock any locks~~ assigned to the at least one savepoint ~~is are~~ released, wherein ~~the first lock any locks~~ assigned to the transaction ~~is are~~ maintained, wherein the second lock is released and the first lock is maintained.

18. (Currently Amended) A system, comprising:
a data manager for performing tasks on data, wherein the tasks comprise:
providing at least one savepoint in a transaction,
assigning a first lock to the at least one savepoint,
assigning a second lock to the transaction, wherein the first and second locks are acquired after the at least one savepoint,
responding to a recovery manager request for a rollback to the at least one savepoint by undoing operations performed since the at least one savepoint according to a log,
and

requesting to a lock manager for release of ~~the first lock any locks~~ assigned to the at least one savepoint, wherein ~~the second lock any locks~~ assigned to the transaction is ~~are~~ maintained;

the lock manager for creating and maintaining the first lock assigned to the at least one savepoint and the second lock assigned to the transaction, and for releasing the first lock assigned to the at least one savepoint when the transaction is rolled back to the at least one savepoint, wherein the second lock assigned to the transaction is maintained;

a log manager for storing information on the tasks in the log, wherein the log comprises information concerning data and schema modifications, and the at least one savepoint; and the recovery manager, wherein the recovery manager processes the request for the rollback to the at least one savepoint by advising the data manager of the request.
